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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,126	12/09/2003	Karp-Sik Youn	1349.1314	3207
21171	7590	07/28/2005	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			VO, ANH T N	
			ART UNIT	PAPER NUMBER
			2861	

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/730,126

Applicant(s)

YOUN, KARP-SIK

Examiner

Anh T.N. Vo

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-19 is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Objection***

Claim 10 is objected to in that “a projection” at line 7 should be changed to –the at least one protrusion--. Correction is required.

## **CLAIM REJECTIONS**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior arts are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 USC 103 (a) as being unpatentable over Fukasawa et al. (US Pat. 5,910,808).

Fukasawa et al. disclose in Figures 1-7 a pump unit for an ink jet printer comprising:

- a tube (22) connected to the inkjet head nozzle (7) and being U-shaped (Figure 5);
- a plurality of rollers (31, 32) which contact an inner arch of the tube (22);

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a rotor (28) to which the plurality of rollers (31, 32) are rotatably mounted, wherein, when the rotor rotates in a direction, at least one of the plurality of rollers (31, 32) rotate and squeeze the tube (22), wherein, when the rotor stops rotating, the plurality of rollers return to a state in which the plurality of rollers do not squeeze the tube due to a recovering force of the tube, and wherein the squeezing of the tube (22) generates the negative pressure in the inkjet head nozzle (7) (Figures 4-7, column 9, lines 19-21 and lines 29-32); and

- wherein the plurality of rollers (31, 32) are a pair of rollers disposed symmetrically to each other column 4, lines 58-60).

Fukasawa et al. disclose the claimed invention except for "the plurality of rollers is tapered". It would have been obvious to one having ordinary skill in the art at the time the invention was made to select changes in the shape of the roller for the purpose of squeezing the tube during a sucking operation, since it is a mechanical design expedient for an engineer depending upon a particular environment and the applications in which the pump is to be used. In re Daily, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). See MPEP 2144.04.

### ***Citation of Pertinent Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art references (US Pat. 4,853,717; US Pat. 5,898,444; US Pat. 5,309,180; US Pat. 6,364,449; US Pat. 6,523,931) cited in the PTO 892 form show a pump that is deemed to be relevant to the present invention. These references should be reviewed.

### ***Allowable Subject Matter***

Claims 4-9 would be allowed. These claims would be allowable because none of the prior art references of record discloses a pump for an inkjet printer applying a negative pressure to an inkjet head nozzle comprising a stopper protruding from a side of the driving gear; a ratchet wheel that rotatably assembled to the fixing shaft, having a driving ratchet formed in a lower end thereof and a cam recess; and a rotor assembled to the fixing shaft, movable in an axial direction,

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and having a driven ratchet formed in an upper end thereof which is engagable with the driving ratchet in the combination as claimed.

Claims 10-19 would be allowed. These claims would be allowable because none of the prior art references of record discloses a pump which pumps ink from an ink source comprising a ratchet rotatable about the shaft, movable about an axial direction, having one or more cam recesses formed on an upper side each of which receive a projection, and having a driving ratchet formed at a lower side and a rotor rotatable about the fixing shaft, movable about an axial direction, and having a driven ratchet formed on an upper side in the combination as claimed.

### ***CONCLUSION***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo whose telephone number is (571) 272-2262. The examiner can normally be reached on Tuesday to Friday from 9:00 A.M. to 7:00 P.M.. The fax number of this Group 2861 is (571) 232-8300.

  
**ANH T. N. VO**  
**PRIMARY EXAMINER**

July 25, 2005